

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A travel planning system comprising:  
a requirements generator module to generate a set of diverse travel requirements, by establishing a plurality of travel requirement templates, and for each travel requirement template, defining a plurality of travel requirements corresponding to different values of the travel requirements with values for a particular travel requirement template based on a candidate set of travel options; and  
a selection module to output a set of diverse travel options, the number of travel options in the set of diverse travel options being fewer in number than the number of travel options in ~~the~~ [[a]] the candidate set of travel options and for each diverse travel requirement in the set of diverse travel requirements, selecting from the candidate set of travel options one or more travel options that satisfy that travel requirement with the candidate set of travel options represented using a data structure that compactly stores the candidate set of travel options.
2. (previously presented) The travel planning system of claim 1 wherein the data structure comprises a graph data structure.
3. (previously presented) The travel planning system of claim 1 further comprising a display to display the diverse set of travel options.
4. (previously presented) The travel planning system of claim 1 further comprising:

a travel option generator module to generate a first ordered set of travel options using a first preference function and a second ordered set of travel options using a second preference function, and

wherein the selection module outputs a set of diverse travel options by selecting a first and second number of travel options from each of the first and second ordered set of travel options, respectively.

Claim 5 is canceled.

6. (previously presented) The travel planning system of claim 1 wherein at least one of the diverse travel requirements within the plurality is not a user entered travel requirement.

7. (previously presented) The travel planning system of claim 1 wherein the plurality of diverse travel requirements comprise at least one of travel on a particular carrier, non-stop travel, outbound travel departing in a predefined time period, return travel departing in a predefined time period, non-stop travel on a predefined airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

8. (previously presented) The travel planning system of claim 7 wherein the predefined time period comprises morning, afternoon, evening or a predefined date.

Claims 9-26 are cancelled.

27. (previously presented) The travel planning system of claim 1 wherein the compact data structure comprises a directed acyclic graph.

28. (previously presented) The travel planning system of claim 1 wherein the compact data structure comprises a grammar.

Claims 29-51 are cancelled.

52. (currently amended) A method for generating a diverse set of travel options, the method comprising:

- determining a candidate set of travel options, the candidate set of travel options being based on user input and represented using a data structure that compactly stores the candidate set of travel options;

- defining a set of diversity requirements, with defining comprising:

- establishing a plurality of travel requirement templates, and for each travel requirement template, defining a plurality of travel requirements, each of the plurality of travel requirements corresponding to a different value of the respective travel requirements with values for a particular travel requirement template based on the candidate set of travel options, and

- for each travel requirement in the set of diversity requirements, selecting from the candidate set of travel options a travel option that satisfies that travel requirement;

- combining the selected travel options for the travel requirements to generate the diverse set of travel options; and

- displaying the diverse set of travel options to a user.

Claim 53 is canceled

54. (previously presented) The method of claim 52 wherein the plurality of travel requirement templates include particular carriers, number of stops, outbound travel departing in a predefined time period, return travel departing in a predefined time period, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

55. (previously presented) The method of claim 54 wherein values for the travel requirement template of particular carriers include a first particular airline and a second, different particular airline.

56. (currently amended) An article of manufacture having computer-readable program portions embodied therein for generating a diverse set of travel options, the article comprising instructions for causing a processor to:

- determine a candidate set of travel options, the candidate set of travel options being based on user input and represented using a data structure that compactly stores the candidate set of travel options;

- define a set of diversity requirements with instructions to define comprising instructions to:

- establish a plurality of travel requirement templates, and for each travel requirement template,

- define a plurality of travel requirements, each of the plurality of travel requirements corresponding to a different value of the respective travel requirements with values for a particular travel requirement template based on the candidate set of travel options, and

- for each travel requirement in the set of diversity requirements,

- select from the candidate set of travel options a travel option that satisfies that travel requirement;

- combine the selected travel options for the travel requirements to generate the diverse set of travel options; and

- display the diverse set of travel options to a user.

Claim 57 is canceled.

58. (previously presented) The article of claim 56 wherein the plurality of travel requirement templates include templates for particular carriers, number of stops, outbound travel departing in a predefined time period, return travel departing in a predefined time period, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

59. (Previously presented) The article of claim 58 wherein values for the travel requirement template of particular carriers with corresponding travel requirements include a first particular airline and a second, different particular airline.

60. (New) The method of claim 52 wherein the structure that compactly stores comprises a graph data structure.

61. (New) The method of claim 52 wherein the structure that compactly stores comprises a directed acyclic graph.

62. (New) The method of claim 52 wherein the structure that compactly stores comprises a grammar.

63. (New) The method of claim 52 wherein selecting comprises:  
generating a first ordered set of travel options using a first preference function and a second ordered set of travel options using a second preference function to operate on the structure that compactly stores the travel options, and combining the selected travel options further comprises

combining a first and second number of travel options from each of the first and second ordered set of travel options, respectively to generate the diverse travel options.

64. (New) The method of claim 52 wherein at least one of the diverse travel requirements within the plurality is not a user entered travel requirement.

65. (New) The method of claim 52 wherein the plurality of diverse travel requirements comprise at least one of travel on a particular carrier, non-stop travel, outbound travel departing in a predefined time period, return travel departing in a predefined time period, non-stop travel

on a predefined airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

66. (New) The article of claim 58 wherein the predefined time periods comprise morning, afternoon, evening or a predefined date.

67. (New) The article of claim 56 wherein the structure that compactly stores comprises a graph data structure.

68. (New) The article of claim 56 wherein the structure that compactly stores comprises a directed acyclic graph.

69. (New) The article of claim 56 wherein the structure that compactly stores comprises a grammar.

70. (New) The article of claim 56 wherein instructions to select further comprise instructions to:

generate a first ordered set of travel options using a first preference function and a second ordered set of travel options using a second preference function to operate on the structure that compactly stores the travel options, and combining the selected travel options further comprises combine a first and second number of travel options from each of the first and second ordered set of travel options, respectively to generate the diverse travel options.

71. (New) The article of claim 56 wherein at least one of the diverse travel requirements within the plurality is not a user entered travel requirement.

72. (New) The article of claim 56 wherein the plurality of diverse travel requirements comprise at least one of travel on a particular carrier, non-stop travel, outbound travel departing

in a predefined time period, return travel departing in a predefined time period, non-stop travel on a predefined airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date.

73. (New) The article of claim 56 wherein the predefined time period comprises morning, afternoon, evening or a predefined date.